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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/657,486      | 09/08/2003  | Carl L. Sisemore     | 84628               | 2685             |

23501 7590 06/20/2006

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EXAMINER

THORNEWELL, KIMBERLY A

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/657,486

Applicant(s)

SISEMORE, CARL L.

Examiner

Kimberly Thornewell

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/8/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1 and 2 are pending in the instant application.

#### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 9/8/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "an *efficient* method for modeling a ship's structure." The term "efficient" has not been defined in the Applicant's disclosure. Furthermore, the term "nearly" in line 10 of claim 1 is a relative term which renders the claim indefinite. The term "nearly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. There is no definition in the disclosure as to what makes the connection from a ship's hull to a beam nearly rigid.

Moreover, claim 1 recites the limitation "the added lump masses" in line 18.

There is insufficient antecedent basis for this limitation in the claim.

5. Claim 2 is rejected because of its dependence on claim 1. Furthermore, the claim contains alternative language in that cross-sectional *and/or* material properties are varied. The use of alternative language renders the claim indefinite.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Albacore Research, Ltd. ("ARL," hereinafter), "ShipConstructor: ShipCAM," 2001 ed.

As per claim 1, ARL discloses a method for modeling a ship's structure, comprising:

- i. constructing a thin hull model of the ship* (page 24, under section "Surface Generation" first paragraph, for constructing surfaces of a hull);

- ii. *constructing a beam model of the ship within the thin shell hull model, the beam model having a principal beam that runs down the centerline along the center of gravity of the ship (page 37, under section "Cutting Sections," planar model showing plane going through centerline of hull along the center of gravity) and is connected to the hull through a series of rigid spider type connections from nodes in the beam model to nodes in the hull model (stiffeners on page 136, under section "Open Cutout References");*
- iii. *adjusting the beam model to match the approximate mass (page 57 numeral 11, showing adjusted weights) and stiffness (page 58 numeral 9, adjusting the stiffeners) of the ship;*
- iv. *constructing a detailed model of equipment and ship sections that includes those portions of the ship that form an integral part of the ship structure as defined in the beam model (page 33, under section "Creating a Deck Surface," taught by creating decks, which form an integral part of the ship structure); and*
- v. *inserting the detailed model into the beam model such that the beam model passes through the detailed model while reducing the added lump masses along the beam in the region of the detailed model (page 72 first paragraph, also see figures on bottom of page for detailed model within beam model).*

As per claim 2, ARL discloses the method of claim 1 wherein *adjustment of the beam model to match the approximate mass and stiffness of the ship is accomplished by adding lumped masses along the length of the beam in approximate proportion to the mass distribution of the ship's structure and equipment* (page 55, under section "Weights & CG," where weight for each plate along the length of the beam model can be varied), *and varying the cross-sectional* (page 39 numeral 12, cross section to be modified under numeral 14) *and/or material* (page 56, numeral 6, see "Material" box in figure) *properties of the modeled ship until the natural frequencies of the ship are in reasonable agreement* (page 21 numeral 7, taught as repeating varying the cross-sectional properties until the waterline is smooth).

### **Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
  - a. US Patent no. 6,560,498, issued to Shin et al. on 5/6/2003, discloses a method for forming curved plates, such as those for a ship hull.
  - b. US Patent Application no. 2002/0019727, filed by Cook on 6/15/2001, discloses a method for modeling the behavior of parts such a ship hull, based on inputs by the user.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Thornewell whose telephone number is (571)272-6543. The examiner can normally be reached on 8am-4:30pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571)272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly A. Thornewell  
Patent Examiner  
Art Unit 2128

  
KAMINI SHAH  
SUPERVISORY PATENT EXAMINER